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ABSTRACT

Drafted in 1978 as a working document for Safety in Outdoor Adventure Programs (S.O.A.P.) by a council of outdoor adventure programmers, checklists outline standard accepted safety policy for Outdoor Adventure Programs and Wilderness Adventure Programs conducted through public or private agencies in California. Safety policy emphasizes: the importance of adequate supervision: proper insurance coverage: proper training and equipment for participants: the presence of first aid and emergency materials: and participant rehearsals for notification, search, rescue and first aid procedures. Checklists outlining goals and objectives, specific equipment needed, applicable forms and materials, and safety procedures are provided for the adventure leader's role and function, emergency procedure, transportation, expedition, campcraft, gardening, service project, rock climbing and rappelling, and adventure ropes course. Appendices present forms and materials for direct use covering first aid kit contents: accident report form: ten basic principles of first aid: first aid at a glance: authorization to treat a minor form: confidential medical history and medical form: emergency phone number list: vehicle travel general safety: vehicle inspection/travel form: garden general safety: garden safety test: hand tools general safety: knots, ropes and slings: climbing log: climbing, rappelling, belaying signals and procedures: pre-trip conditioning: expedition itinerary form: accident near miss form: about backcountry leadership: special equipment for the trip leader: patrol equipment: personal equipment list (backpack): and gasoline stove care and operation. (NEC)

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# SAFETY IN OUTDOOR ADVENTURE PROGRAMS

## S. O. A. P.

## SAFETY POLICY

JAN 1980
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DEVELOPED AND APPROVED BY
THE S.O.A.P. COUNCIL
MAY 14, 1979

RC 011763

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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"Safety Pays, Every Pay Day"

I first began to consider Safety in outdoor adventure programs when I saw the message SAFETY PAYS, EVERY PAY DAY "Dymo-labled" on the hard-hat of an old codger who owned and ran the private camp at Lime Kiln Creek, south of Big Sur on the rugged California Coast. That was 1970 and my first experience with outdoor education. I was a student teacher for Reno Taini, a crazy Biology teacher at Jefferson High School (Daly City, CA). Well, Reno turned me on to working with young people in the wilds and taught me a good deal about planning, organizing and managing outdoor education experiences. It was only a couple of years later when I helped plan and run the first backpack expedition Reno did with students from Jefferson. We learned a lot. Like setting up camp early in the day and building shelters and time control. We learned from experience - usually the hard way. Wet, cold, tired times.

Well, ole Wallace Henkel has passed on but his message lives on. SAFETY PAYS EVERY PAY DAY! Years passed and I continued my involvement in outdoor education and high-challenge activities. Safety continued to be a concern for myself and other local adventure programmers. We met and talked informally about our programs - safety was invariably one of the subjects. We continued to learn and improve - often, still, the hard way.

I attended the 5th Annual Association for Experiential Education (AEE) Conference at Asilomar, Ca. November of 1977. An Outward Bounder, John Rhoades, gave an excellent seminar on Safety and Liability. His presentation set me in motion. In January of 1978, I met with Vic Walsh, Program Director at Northwest Outward Bound School, and discussed the benefits of a Safety Committee for the 4-H Adventure Program I was coordinating in San Francisco County.

The 4-H program formed a Safety Committee in March of 1978 to develop a "Safety Policy" for 4-H outdoor adventure activities. The committee consisted of three (3) 4-H Volunteer Leaders and myself. Wayne MacDonald, Director of the

Urban Pioneer Program in San Francisco and a 4-H Leader took on the job of compiling and writing-up the draft safety policy after we decided on the format and areas to be covered.

Wayne finished the draft in May of 1978 and duplicated several copies which we distributed to local colleagues for feedback. I attended the 6th Annual AEE Conference in September of 1978 and came back re-kindled about the urgency of safety management in the 4-H adventure program and interested in sharing what I had learned with other adventure programmers. In Los Padres National Forest a month later, Wayne and I planned the first "Safety" meeting to include as many interested people as possible from the local scene.

S.O.A.P. (Safety in Outdoor Adventure Programs) was born on November 8, 1978. The draft policy that Wayne had written was adopted as a temporary working document for S.O.A.P. subject to modification and review at future meetings.

S.O.A.P. is formed as a council of outdoor adventure programmers whose common goals are to:

- Develop a uniform standard for the safe operation of outdoor adventure programs, i.e. - a Safety Policy.
- Continue to offer outdoor adventure programs based on safe operating procedures.
- Develop a communication network to 1) facilitate consistent and regular revisions and additions to the Safety Policy and 2) foster interaction, sharing and growth among members.
- Develop a public relations program to promote the awareness, understanding and appreciation of adventure programs to relevant organizations, groups and individuals (e.g. - School Boards, Administrators and Insurance Companies).

Membership to S.O.A.P. is open to all persons who attend meetings and/or demonstrate an interest in the proceedings regardless of race, creed, religion, color, national origin, sex, or mental or physical handicap. Decisions are made based upon consensus with majority vote as a last resort.

Since November 1978, three other meetings led to revision and consensual acceptance of the "Safety Policy". Ideas, information and criticism came from a number

of individuals in the adventure field. All the assistance was invaluable in developing the finished product.

I am convinced that adventure programs provide meaningful and needed experiences for young and old alike. The challenge involved is a main attraction. I hope to continue offering adventure opportunities to the people I serve and work with. Safety will continue to be a concern in the success and survival of adventure programs. After all, SAFETY PAYS - EVERY PAY DAY.

Jim Brenner
S.O.A.P. Coordinator
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August 1979

INTRODUCTION:

The purpose of this document is to establish a checklist of standard accepted safety policy for Outdoor Adventure Programs and Wilderness Adventure Programs conducted through public or private agencies in California. At present, there is no safety policy to which programs of this nature can look to as a standard of accepted practice specifically concerning legal liabilities and safety procedures. Consider the following excerpts (from Lowenstein 1975 after Van Der Smissen):

- There has been found an "*...increasing liability for negligent operation*" for programs which use outdoor facilities.

- The definition of liability is stated as the "*condition of being actually or potentially subject to an obligation, and amenability or responsibility*".

- *Failure to uphold this responsibility is known as negligence, which has been defined by the courts:* 'Negligence is an unintentional breach of legal duty causing damage reasonably forseeable without which breach the damage would not have occured'

- *Negligent conduct in itself, however, is not enough to imply liability. It must be shown that the party charged with negligence owed a duty to excercise care toward the party injured.*

- Descriptive literature of all WAPs (Wilderness Adventure Programs) emphasize expert supervision and safety control in operation. (These programs "*...also warn that the nature of the activity is one which is hazardous, and all schools appear to require that a person acknowledge these hazards and assume the risk involved*".

- *Applicants are required to sign a 'waiver', releasing the school from any responsibility (Parents assume risks for a minor).*

- *...there are so many legal interpretations of what constitutes negligence, that even written assumption of risk is not enough to fully protect a school from liability.*

- *The law appears to uphold the fact that, regardless of the assumption of risk, an educational institution has a certain amount of responsibility in supervising outdoor activities, providing a safe setting, and ample warning of situations where dangers are involved.*

- *...the amount of supervision, the conduct of the activity, and the equipment and environment with which the activity is undertaken are all considerations to which a WAP holds a certain amount of responsibility,* and

- *the best protection for WAPs against law suits is to exercise the proper amount of care and protection to avoid instances of undue risk and harm to a participant. This can best be accomplished by maintaining a strict level of safety and employing competent, trained leaders.*

It can be determined from the above that the onus of responsibility for the prevention of personal injury to a participant due to negligence lies with the supervisor's or leader's ability to prevent forseeable accidents due to equipment breakdown, nature of activity, hazardous settings and judgement.

In considering the causes of accidents and their prevention, the (Forest Service 1970) lists the following:

> *Accident. The event which resulted in injury or damage.*
>
> *Cause. Every accident, except for 2 percent which are classified as acts of God (lightning, tidal wave, windstorm and earthquake), is caused by the unsafe behavior of an individual, or an unsafe mechanical or environmental condition, or both.*

*Personal or Mechanical Factor. The reason why the individual committed the unsafe act, or why someone allowed an unsafe condition to exist. There are numerous reasons.*

*Physical Defect. He was physically unable to do the job safely, because of physical handicap, fatigue, poor vision, etc.*

*Lack of Knowledge or Skill. He either did not know the safe practice or fully understand how to proceed in accomplishing the task.*

*Unsafe Attitude. He was capable and knew the right way; but for some reason, such as inattention, carelessness, or shortcutting, did not perform correctly.*

*Background Factors. To determine these factors, attention should shift from the individual involved in the accident to the organization and its management operations.*

*The accident and injury record of the organization (and) functional activity...*

*Follow-up action on previous accidents.*

*The degree of communication, up and down the line, regarding problems.*

*Were errors at each level corrected immediately?*

*Were there adequate equipment, funds and personnel assigned to the job?*

*Were the (participants) given adequate training and ongoing instruction?*

*Was the ... supervisor trained and experienced in leading people and managing a project...?* and

*Was equipment used as intended, as well as, inspected and maintained, daily?*

In developing this safety policy and corresponding safety checklist for outdoor adventure and wilderness adventure programs, the above definitions, causes and factors of accidents were given primary

importance. Given the multitude of causal factors and the laws of chance, it is assumed that accidents will happen in our programs. It is therefore incumbent upon the leaders of these programs to do whatever is in their power to reduce the severity of these accidents, if and when they happen, and to rule out negligence as a causal factor by adhering to a mutually agreed-upon safety policy accepted as a standard in the field of outdoor adventure and wilderness adventure programs.

It is, therefore, our intent to provide a vehicle to implement consistent, safe techniques and practices in all activities associated with outdoor adventure and wilderness adventure programs in California. Specifically, our purpose is to develop a safety policy and corresponding safety checklist for use by the leaders in these programs.

Wayne A. MacDonald

## CHECKLISTS

GENERAL SAFETY POLICY (Adapted from North Carolina Outward Bound School Instruction Manual) *

1. No activity shall be undertaken without adequate supervision and proper insurance coverage.

2. These safety policies shall apply regardless of the skill level of the participant.

3. A safety briefing which sets a suitable tone shall be a part of every activity, where appropriate.

4. No individual will be placed in a position of responsibility for the safety of others without first having received specific instruction and demonstrated the ability to perform satisfactorily to the appropriate supervisor.

5. Staff operationally responsible for students are required to be personally familiar with and trained on the types of terrain upon which program activities will take place, eg. rock climbs, water areas, expedition areas, etc.

6. Program activities will conform to applicable state and federal regulations and standards.

7. No one may participate in any activity sponsored by the organization or program without the specific permission of the supervisor, instructor, or leader.

8. Students shall not be permitted to participate alone (i.e. on his/her own, away from the group or instructor) in any of the following planned activities without adequate training and permission of the instructor:

| | |
|---|---|
| -mountaineering | -rafting/tubing |
| -rock climbing | -expedition travel |
| -swimming and drownproofing | -caving |
| -boating of any kind | -ropes course |

9. Participants shall be protected by safety devices and techniques in situations where appropriate.

10. First aid and emergency evacuation materials will be present during all potentially dangerous activities.

11. Notification, search, rescue, and first aid rehearsals will be conducted during all courses.

*revised and agreed to by S.O.A.P. members - Dec. 13, 1978.



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GENERAL SAFETY POLICY (CONTINUED)

Illicit Drug Use

Unless prescribed by a physician, drugs are incompatible with the safety standards, goals, and philosophy of these programs. The use of drugs while on a field experience, not only jeopardizes the safety of the users, it also jeopardizes the safety of the non-users. The use of illegal drugs while in this program, reflects adversely upon all the members of the program. Therefore:

- No illicit drugs or drinking of alcohol will be allowed on any field experience by either staff or students.
- No participant shall use illegal drugs while participating in any activity related to these programs.
- Any participant who refuses to refrain from using illegal drugs while participating in a program activity, must leave the activity.

Insurance Coverage

The leader should know what type and extent of accident, medical and liability insurance exists for participants and staff - this includes amount of coverage and limitations. In addition, the leader should: be sure all necessary forms are completed and routed to appropriate authorities for coverage; follow procedures established by insurance company in all insurance matters; and have an adequate supply of emergency insurance forms. Leader should not proceed with any activity when insurance and liability are not clearly determined or defined. Vehicle insurance should meet minimum state requirements.

Parent Information

Parents of minors must be informed of any hazardous activities in which their child will participate. They must also be apprised of any and all necessary forms. No minor shall participate in any activity without having completed necessary forms on file, signed by legal parent or guardian. No participant at age of majority shall participate in any activity without having completed necessary forms on file.

APPENDICES

The "Appendices" herein are offered as suggestions and examples. Each leader/organization may modify them as appropriate to his or her program needs.

ACTIVITY : Leader's Role and Function

GOALS AND OBJECTIVES : To insure enforcement of this safety policy for the health, safety and welfare of the program's participants and staff.
To assist in selecting additional staff instructors.
To orient and train staff and participants to safety materials and/or equipment as needed for activity.

SPECIFIC EQUIPMENT : As required.

APPENDIX: See S "About Backcountry Leadership"

SAFETY CHECKLIST : The leader will:

- Enforce all aspects of this safety policy in the conducting of the program until such time as the policy is revised by S.O.A.P. members.
- Hold a valid First Aid Certification or its equivalent.
- Inform participants of any potential hazard or risk in any activity.
- Be responsible for the completion of emergency forms, vehicle forms, equipment logs, medical forms, etc. either by himself or by a delegated assistant.
- At all time, exercise good judgement.
- Be assumed to possess mental and emotional stability.
- Be experienced in any challenging activities he instructs.
- Inform students of safety requirements of any activity.
- Be responsible for the inspection of all safety equipment.
- Assess the readiness of the students before any challenging activity.
- Become immediately involved whenever a serious injury occurs by giving first aid, investigating causes, and following proscribed emergency procedures.
- Analyze and list potential activity problems and hazards and develop a plan to eliminate or avoid these.
- Insure proper use of equipment by participants and staff.
- Set a personal example of safe behavior.

ACTIVITY : Emergency Procedure *

GOALS AND OBJECTIVES :
To facilitate the safe evacuation of an injured victim.
To facilitate the safe rescue of lost participant(s).
To facilitate the recovery of fatally injured victim.

SPECIFIC EQUIPMENT :
- First Aid Kit
- Topographic Maps and Compass
- Rescue Equipment as needed
- Emergency Vehicle and key
- Coins for pay phone
- Appropriate Forms

APPENDIX :
see A "First Aid Kit - Contents"
see B "Accident Report Form"
see C "Ten Basic Principles of First Aid"
see D "First Aid at a Glance"
see E "Authorization to Treat a Minor" form
see F "Confidential Medical History and Information" form
see G "Emergency Phone Number List"
see R "Accident-Near Miss Form"

SAFETY CHECKLIST :
Accidents resulting in serious injury:
1. Give first aid. Care for the injured on the spot. Treat for shock.
2. Assess the seriousness of the situation.
3. Make certain no other person is in danger.
4. Keep an accurate log of the victim's condition from the time of the accident. Include his/her temperature, respiratory rate, and, if possible, blood pressure. These should be recorded every hour or less.
5. Record time of any drugs given to victim.
6. All students will be familiar with necessary emergency procedures in the event of an instructor's incapacity.
7. Make quick assessment of injuries. Mark location on map.
8. Obtain emergency insurance claim forms and fill out 2 (two) Accident Report Forms. Retrieve Authorization To treat a Minor Form and Medical History Form. Send forms with victim.
9. An aid or staff and one student with the exact information and needs will be sent to contact the closest other patrol. The instructor stays with the patient at all times.
10. Check for shock among the rest of the group. Keep spirits high and use people to make camp and secure for the night. keep everyone busy.

ACTIVITY : Emergency Procedure (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX:

SAFETY CHECKLIST :

11. An instructor, an aid or staff person, and two students pack out to the emergency vehicle. Make sure you know where the key is hidden. Make sure they have sufficient food and water.
12. Drive vehicle to nearest phone and contact nearest emergency services. Give information from accident form. Give route to emergency services.
13. Drive vehicle back towards injured. Leave note on window for emergency people coming to help.
14. Continue to injured on foot with appropriate evacuation equipment.

- If participant is to be evacuated, contact immediate supervisor of organization. Relay information and circumstances. Immediate supervisor to contact parents.
- When injured is safely evacuated, re-contact immediate supervisor with pertinent information and doctor's report. Supervisor to contact parents.
- Do not contact news media.

Search and Rescue

- Will commence no later than 12 hours after unscheduled loss of contact with student(s) regardless of whether accompanied by staff.
- Instructor or staff and two students backtrail to find signs of lost participants.
- If not found within 24 hours, an instructor, an aid or staff person, and two students pack out to emergency vehicle. Make sure you know where key is hidden. Make sure you have sufficient food and water.

ACTIVITY : Emergency Procedure (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX:

SAFETY CHECKLIST :

- Drive vehicle to nearest phone and contact nearest emergency services (Sheriff's Dept.) to conduct grid search of area.
- Accompany search unit back to patrol and begin search.
- Contact immediate supervisor and give specifics of incident.
- Patrol maintains base search camp. Keep log of efforts.

Injury Resulting in Fatality

- Insure the safety of the rest of your group. Organize. Assign specific jobs and responsibilities. Avoid allowing the stress of the situation to compound the emergency.
- Do not disturb the body. Any such accident must be initially treated as a homocide by the police. Only the coroner or medical officer or his agent can authorize removal of the body.
- The police will need to make a careful investigation of the site. Do not disturb it.
- Send at least two messengers out to emergency vehicle. Drive to nearest phone and contact emergency services as above.
- Messengers should have:
    - Accident Report Form
    - Name, address and phone number of victim (from authorization to treat minor form).
    - Names and phone numbers of other party members
    - Distance by road, trail and off the trail.
    - Probable time to reach the victim.
    - Equipment and manpower needed.

ACTIVITY : Emergency Procedure (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX :

SAFETY CHECKLIST :

- Where you will meet rescue/recovery party.
- How you can be contacted by phone until you can meet rescue/recovery team
- Contact immediate supervisor and give an assessment of situation
- If the emergency is of such magnitude as to attract the press, all statements beyond a basic one from the instructor are to come from the office of the immediate supervisor and/or legal assistant.

* Adapted from San Francisco 4-H Youth Program, North Carolina Outward Bound School and Northwest Outward Bound School.

ACTIVITY : Transportation *

GOALS AND OBJECTIVES : To safely transport participants to and from all activities of the program where vehicular travel is necessary.

SPECIFIC EQUIPMENT :
- First Aid Kit
- Safety Flares
- Appropriate Maps

APPENDIX:
see A "First Aid Kit - Contents"
see H "Vehicle Travel - General Safety"
see I "Vehicle Inspection/Travel Form"

SAFETY CHECKLIST :
- Vehicles shall be driven only by physically fit employees who have qualified for and who hold a valid state driver's license.
- Any driver who is habitually careless, repeatedly uses poor judgement, or repeatedly violates driving regulations shall not be allowed to drive in program.
- Only authorized personnel shall be allowed to ride in vehicles and should be safely seated before the vehicle starts.
- The driver must not have additional duties while operating the vehicle.
- When transporting passengers, vehicles shall not be loaded beyond safe seating capacity. In emergency, additional students shall ride completely within the body of the vehicle.
- Any object likely to shift and damage the vehicle, unbalance the vehicle, injure passenger, or cause distruction, must be secured.
- All passengers shall remain seated if seating facilities permit, while the vehicle is in motion, and all passengers shall ride completely within the body of the vehicle.
- Passengers must wait for the vehicle to come to a complete stop before dismounting or entering the vehicle.
- Passengers shall not ride with their feet hanging out of, or over the rear or side of, any vehicle.
- Scuffling or horseplay while riding in any vehicle is prohibited.
- Every vehicle used for the transportation of participants or equipment shall carry a suitable first aid kit.
- Prior to each use of vehicle, check the items on Vehicle Inspection/Travel Form.

ACTIVITY : Transportation (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX:

SAFETY CHECKLIST :

- Drivers shall not exceed the speed limits set forth by states and municipalities.
- Do not overfill gasoline tanks. Allow for temperature expansion and tilting.
- Passengers may be transported in the beds of vehicles without seats provided they are required to sit on the floor and provided such vehicle has sufficiently high and strong guard rails to prevent falls.
- Passengers must never ride on top of a load of supplies or tools.
- All trucks, pickups, busses, or vehicles transporting participants must come to a full stop at railroad crossings and observe the motor vehicle laws of the state relative to coming to a full stop before entering a state highway or county road.
- Seat belts must be used, if present.
- Driving shifts should never exceed 8 hours. Avoid driving continually for more than 2 hours. Pull off the road for a short rest, coffee break, or change of drivers if you get drowsy at the wheel due to lack of sleep, long trip, motor drone, straight-aways, etc.

* Adapted from North Carolina Outward Bound School and Forest Service - Health and Safety Code.

ACTIVITY : Expedition *

GOALS AND OBJECTIVES : To insure the safe movement of participants across various terrains
To insure the safety of participants in various weather conditions.

SPECIFIC EQUIPMENT :
- First Aid Kit
- Emergency Evacuation Materials
- Personal Backpacking Equipment
- Group Backpacking Equipment
- Topographic Maps

APPENDIX :
see A,B,C,D,E,F & G - "Medical/Emergency Information"
see R - "Accident - Near-Miss" form
see T - "Special Equipment for the Trip Leader"
see U - "Patrol Equipment
see V - "Personal Equipment List"
see Q - "Expedition Itinerary Form"

SAFETY CHECKLIST :
- Instructor will complete Expedition Itinerary Form and leave copy with supervisor, students' parents, and ranger (if present)
- Students will be instructed in skills requisite for the activities in which they will be engaged.
- Instructors will accompany training expeditions.
- Expedition groups will not divide except in an emergency or unless approved by the instructor.
- A student "head count" will be taken at every rest stop.
- Each group must carry a compass, flashlight, map, fire-building equipment and first aid kit.
- Each person will be dressed suitably for the prevailing and anticipated weather conditions and carry a whistle.
- Students will be briefed in the emergency procedure.
- At a minimum, training will include instruction and practice in: map reading and navigation; first aid; survival skills; safety requirements; emergency procedures; and backpacking equipment use.
- Campcraft safety policy will be followed.
- When traveling in rocky country, be on the alert for any rocks or logs that might be dislodged. Stagger participants so that they are not directly below each other.
- Special precautions shall be taken for all activities which occur during hours of darkness.

(continued)

ACTIVITY : Expedition (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX:

SAFETY CHECKLIST :

Water Crossings

- Rivers should be waded at their widest point where they are shallowest.
- The backpack waistbelt should be disconnected in the event of a fall. Some foot protection should be worn.
- As a guiding principle, when crossing a stream, face upstream.
- As a guiding principle, do not ford if a satisfactory above-water crossing is available nearby.
- If it is advisable to string a rope across the stream to be used as a handrail, persons shall walk on lower side (down stream) of rope.
- Never tie participants together when crossing.
- Test with pole for deep holes if bottom cannot be seen.
- If student feels they are going to lose balance on high footlog, do not hesitate to let them get down on hand and knees.
- If appropriate, place a spotter downstream.

Patrol Solo Expeditions

- Instructor shall assess patrol's physical and mental state before allowing students to engage in an independent unaccompanied journey.
- Minimum number of students shall be four.
- The patrol shall not cover terrain more hazardous than that previously experienced with the instructor on training expedition.
- Routes will be reconnoitered by staff before student use.
- Patrol Solo Expeditions shall last no longer than four days, with each group checked daily.



(continued)

ACTIVITY : Expedition (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX:

SAFETY CHECKLIST :

Patrol Solo Expeditions (continued)

- Patrols shall have satisfactorily shown knowledge of map and compass reading, first aid, emergency procedure, and camp-craft skills before beginning venture.
- Instructor will check quantities in first aid kit before and after and know what was used and why.
- No swimming is allowed.
- No major stream crossings and no rope work will be included.
- Each member will have adequate spare clothing before beginning.
- Each patrol must carry a flashlight, compass, map, matches and first aid kit.
- Each patrol will be reminded of safety precautions before proceeding.
- Patrol members shall not hitchhike, beg food, or ride in any vehicle other than program vehicle or emergency services vehicle.

Personal Solos

- There will be two instructors on solo watch at all times and placed in such a manner as to provide maximum security to participants.
- A daily positive check of participants will be made, and more frequently if the weather requires it.
- Participants will be issued all necessary equipment for safety for the length of the solo.
- No swimming is allowed on solo.
- Solo shall not exceed three days and three nights.
- The instructor will draw a sketch of sites and names of students.



(continued)

ACTIVITY : Expedition (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX:

SAFETY CHECKLIST :

Personal Solos (continued)

- Particular care will be taken to safeguard the welfare of female students from sexual assault and Menstrual attraction of bears.
- Each participant will know who and where his neighbors are and alert them if approached by strangers. If asked what a soloist is doing, the safest reply is simply "waiting for a friend".
- In case of emergency, the participant will blow whistle in group of 3 short blasts, then wait one minute, and repeat. Those hearing the signal will reply with a group of 6 blasts at minute intervals and leave solo and provide help at once. Distressed participant continues to signal until the rescuers reach him.
- Instructor will assess personal physical and mental state of each participant and prevailing weather conditions before beginning this venture.

Weather

- Instructor will obtain weather forecast before each expedition and inform participants of same.
- Specific instructions will be given each student in self-protection against weather hazards.
- Care will be taken to ensure the adequacy and appropriateness of clothing and equipment for particular weather conditions.
- If traveling in adverse weather, instructor will take periodic (15 minute) head counts of participants.

(continued)

ACTIVITY : Expedition (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX:

SAFETY CHECKLIST : Special Precautions

- Before daily activities, students will be told of any hazardous conditions or terrain they might encounter.
- Before daily activities, students will be shown, on a map, the destination and route of that day's travel.

* Adapted from: Northwest Outward Bound Schools, North Carolina Outward Bound School, Michigan 4-H Challenge Program and Forest Service - Health and Safety Code.

ACTIVITY : Campcraft *

GOALS AND OBJECTIVES : To provide a safe procedure for participants to meet three basic needs of life: food, water and shelter.

SPECIFIC EQUIPMENT :
- First Aid Kit
- Personal Backpacking Equipment
- Group Backpacking Equipment
- Emergency Evacuation Equipment

APPENDIX :
see A,B,C,D,E,F,G & R- "Medical/Emergency"
see S "About Backcountry Leadership"
see T "Special Equipment for Trip Leader"
see U "Patrol Equipment"
see V "Personal Equipment List"
see W "Gasoline Stove Care and Operation"

SAFETY CHECKLIST :
- Establish camp before dark if possible
- Choose site protected from standing dead trees and branches, falling rocks, and flooding.
- Choose site protected from rain and wind.
- Choose site near available water.
- If potability of water is doubtful, purify with halozone tablets, boil for one minute vigorously, or other chemical process.
- If on river, obtain drinking water upstream and wash up down stream.
- If bathing with soap, get wet, lather well away from stream, rinse with pot or billy can away from stream. After soap is removed, rinse in stream.
- Toilet facilities 100 yards away from camp, 200 feet from water source. Dig individual holes. The holes should not be deeper than the depth of bacterial activity, usually 6" - 8". Cover well. Burn paper.
- No student is to leave the group without informing instructor of destination.
- Instructor will demonstrate safe operation of stoves.
- Build fires only in emergencies and on old fire scars or in established fire pits. For new fires, remove surface layer to mineral soil carefully. Replace when through.
- When building shelter, slope towards wind. Always anticipate rain and pitch accordingly. Inspect shelter for rips.
- At night times, have flashlight available for emergencies.
- In bear country, do not sleep with food.
- If animals in area are known to carry plague, sleep away from burrows.



*Adapted from North Carolina Outward Bound School and Forest Service - Health and Safety Code.

ACTIVITY : Gardening *

GOALS AND OBJECTIVES : To insure the proper use, maintenance and storage of garden tools by the participants.
To evaluate the participant's knowledge of safe garden practices.
To insure participant's identification of tools used in garden.

SPECIFIC EQUIPMENT :

- First Aid Kit
- Wheelbarrow
- Round Pointed Shovel
- Square Pointed Shovel
- Spade with D Handle
- Spading Fork
- Cultivator
- Standard Garden Hoe
- Scuffle Hoe
- Warren Hoe
- Bow or Garden Rake
- Leaf or Grass Rake
- Hand Trowel
- Lopping Shears
- Hedge Shears
- Hand Pruning Shears
- Grass Shears
- Pitch Fork
- Mattocks/Picks

APPENDIX :

- see K "Garden Safety Test"
- see J "Garden - General Safety"
- see L "Hand Tools - General Safety"
- see A "First Aid Kit - Contents"

SAFETY CHECKLIST :

- Any injury, no matter how slight, should be reported to the instructor.
- All tools carried below knees, sharp edges pointed away from body.
- Tools never carried over shoulders.
- When not in use, all sharp edged tools shall be placed to avoid causing injury.
- Shears and other sharp-edged tools should be closed with the sharp edge protected.
- Sharp tools should never be carried in pockets.
- Rakes, hoes, cultivators, and other long-handled tools, should be held near end of handle to avoid striking others.
- Tools to be used only for the purpose for which they were designed.
- No running with, or riding in wheelbarrows.
- Keep back straight and use legs when lifting handles of loaded wheelbarrow.
- Do not overlaod, keep weight evenly balanced with weight well forward in wheelbarrow.
- Garden hoes should be coiled when not in use to prevent tripping.
- Hoes, cultivators, rakes and other garden tools should not be raised above the knee when in use.
- Instructor to be notified if tool found to be in need of repair.
- Any sharp object - glass, nail- should be removed from soil before proceeding with job.
- Tools and materials not to be protruding from work benches or potting tables.



(continued)

ACTIVITY : Gardening (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX:

SAFETY CHECKLIST :
- Cans and metal containers used in nursery work should be handled carefully to avoid cuts from the sharp edges.
- One participant assigned duty of getting tools from storage.



* Adapted from Community Environmental Education Program, Jefferson High School, Daly City, and Forest Service - Health and Safety Code.

ACTIVITY : Service Project

GOALS AND OBJECTIVES : To insure the safe use of tools during service project activities.

SPECIFIC EQUIPMENT :
- First Aid Kit
- Tools as appropriate to project.

APPENDIX:
see A "First Aid Kit - Contents"
see L "Hand Tools - General Safety"

SAFETY CHECKLIST :
- An instructor will be present to insure that suitable precautions are taken in handling of tools.
- Heavy boots must be worn by students using axes, shovels and hoes.
- Unsheathed chopping tools will be carried by grasping handle close to head of tool, with blade parallel with leg, at arm's length and free from body.
- Footing must be firm before chopping.
- Chop away from feet, legs, and body. Stand in such a way that, if tool glances, it cannot strike feet or legs.
- Remove underbrush and branches that tool might hit.

Saws
- First cut of handsaw is to be made toward you.
- Carry bowsaw over shoulder with blade to rear and guarded.

Shovels
- Shovels should not be used as pry bars.
- Before using, check handles for splits, cracks and slivers. Discard if defective.

Hammers
- Nails being driven should be held just under the head and not at the base..

ACTIVITY : Rock Climbing and Rappelling *

GOALS AND OBJECTIVES : To insure participant's understanding of signals and use of equipment.
To reduce the hazard of equipment breakdown.
To prevent un-belayed falls.

SPECIFIC EQUIPMENT :
- Climbing Helmets (adjustable or various sizes).
- Goldline (7/16") or Kermantle (11mm) ("Perlon"): Rope - 5,000 lbs. breaking strength.
- Locking Carabiners
- Non-Locking Carabiners
- First Aid Kit
- Evacuation Gear
- Jumars
- Etriers
- Climbing Shoes
- Strong Leather Gloves

APPENDIX : see A "First Aid Kit - Contents"
see E "Authorization to Treat a Minor"
see F "Confidential Medical History and Information"
see M "Knots, Ropes and Slings"
see O "Climbing, Rappelling, Belaying-Signals and Procedures"
see N "Climbing Log"

SAFETY CHECKLIST :
1. Hardhats must be worn at the climbing/rappelling site.
2. Before beginning ropework and periodically through the climbing day, instructor must check ropes, slings, carabiners, hardhats, gloves, first aid, evacuation gear.
3. No student will lead a climb unless competency has been proven to instructor or secondary belay system is in use.
4. A safety belay (e.g.-Prussik) will be used on all rappels and climbs.
5. Belayer will be tied with either Bowline or Figure Eight Loop clipped into swami belt (See Appendix figures 2 and 3).
6. Each belay point will be checked by and supervised by competent staff.
7. Anchors will consist of bowline or figure 8 on post or tree or webbing tied with ring bend around rock (or similar anchor using bolts, etc.).
8. If any student touches any anchor point or tie-in, activity is to be immediately halted until instructor ascertains that nothing has been changed.
9. Climbing procedures will be reviewed for participants frequently. Instruction in climbing techniques will be progressive from basic to advanced.
10. All climbing will be supervised by technically competent staff.



(continued)

ACTIVITY : Rock Climbing and Rappelling (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX :

SAFETY CHECKLIST :

11. Climbing areas will not be over-crowded. There will be adequate instructor/student ratio.
12. No one will climb with students without permission of instructor.
13. No solo climbing.
14. All belayers must be anchored.
15. No one is to stand directly above or below a climber or rappeller except an instructor.
16. When bouldering, spotters will be used if appropriate. If spotting is not sufficient, climbers will be secured by rope.
17. Specific Rules (Appendix M) for ropes will be followed.
18. Person throwing top rope must be anchored.
19. If used, Swiss seats will be finished with Ring Bend.

* Adapted from Northwest Outbound Schools, North Carolina Outward Bound Schools, Ropes, Knots and Slings for Climbers (Wheelock and Michigan 4-H Challenge.

ACTIVITY : Adventures Ropes Course *

GOALS AND OBJECTIVES : To insure safe and sane use of adventure ropes course obstacles by participants.
To stress "experienced knowledge" of safety as opposed to "common sense".

SPECIFIC EQUIPMENT :
- First Aid Kit
- Helmets, Hard Hats
- Safety webbing, slings or commercial harnesses.

APPENDIX :
see E "Authorization to Treat a Minor" form
see A "First Aid Kit - Contents"
see B "Accident Report Form"
see F "Confidential Medical History and Information" form

SAFETY CHECKLIST :
- Bring signed Authorization to Treat a Minor form for each participant.
- Bring Confidential Medical History and Information form for each participant (including instructor).
- An instructor will be present whenever practice on the ropes course is being undertaken.
- All exercises will be demonstrated or explained by an instructor before being attempted by students.
- Instructor will be present to enforce all safety measures.
- In situations where the students are attempting a ropes course element or an initiative problem at less than 6-8 feet off the ground (including the 'wall'), spotting by the other participants will be essential.
- Spotting will be demonstrated to the participants prior to beginning the initiative.
- Spotters will at all times keep their eyes on the participant and anticipate his movements.
- All participants will be belayed on the high ropes course elements or where a significant risk of falling exists which cannot be adequately protected by spotting.
- Unless a commercial harness is used, belay will consist of a bowline on a coil or a "Swiss Seat" tied off with a ring bend and clipped into a figure eight loop by a locking carabiner or two non-locking carabiners with opposing gates.
- Hardhats will be worn on the ropes course as appropriate in initiative exercises.
- Any unsafe methods such as hanging upside down, or over-straining will be stopped immediately by the instructor.



(continued)

ACTIVITY : Adventures Ropes Course (continued)

GOALS AND OBJECTIVES :

SPECIFIC EQUIPMENT :

APPENDIX :

SAFETY CHECKLIST :

- Participants will wear boots or sneakers and it is suggested long shirts, and long baggy pants.
- All watches, jewlery, etc. will be removed prior to participation in any event. Glasses will either be removed, as appropriate or secured with elastic bands.
- The instructor will inspect all knots, ropes, lashings, and safety features and look for obtrusive rocks, before beginning.
- Only authorized and properly scheduled groups are able to legally use the ropes course.

*Adapted after Project Adventure, Massachusetts.

# APPENDICES

## FIRST AID KIT - CONTENTS *

INFORMATION:
- Accident Report Form (see appendix)
- First Aid at a Glance (appendix)
- First Aid Principles (see appendix)
- Emergency Procedures (text)
- First Aid Kit - Contents List

WOUND CARE:
- Band-Aids (20-1")
- Band-Aids (30-3/4" x 3")
- Sterile Gauze Pads (10-2" x 2", 10-3" x 3")
- Triangular Bandages (2)
- Elastic Bandage (1-3")
- Roller Bandages (2-1", 2-2", 1-3", 1-4")
- Paper Tape (1-½", 1-3") rolls to hold dressing in place, make "butterfly" closures, splinting, sprains, etc.
- Athletic Tape
- Sterile Bandage Compress (3-2" x 2", 1-3" x 3")
- Sterile Eye Pads (2)
- Moleskin (1 sq. ft.)
- "Q"-Tips (10-20)

INSTRUMENTS:
- Bandage Scissors
- Tweezers
- Thermometer (in plastic case)
- Scalpel or Razor Blade
- Safety Pins (20), various sizes
- Needle and Thread
- Cutter's Snake Bite Kit

* Adapted from San Francisco 4-H Youth Program

MEDICATIONS: INSTRUCTOR'S KIT ONLY

Read all instructions carefully before use.

- Antihistamine capsules (20)
- Water Purification Tablets
- Caladryl Lotion (2½ oz.)
- Fels Naptha Soap (½ bar)
- Insect Repellant
- Tylenol
- Rock Salt (or similar) to reduce muscle cramps and heat exhaustion

- B -

ACCIDENT REPORT FORM (Adapted from San Francisco 4-H Youth Program)

NAME OF VICTIM _____

AGE: _____, SEX: ____, SIZE: (SMALL 100-125)____, MEDIUM (125-150)____, LARGE ____

ORGANIZATION INVOLVED: _____

DATE AND TIME OF INJURY: _____

EXACT LOCATION OF VICTIM (MARK ON MAP IF POSSIBLE): _____

_____

LAST SEEN BY: _____ DATE/TIME LAST SEEN: _____

NATURE OF INJURY (CIRCLE APPROPRIATE CONDITIONS): _____

_____

_____

| | | | |
|---|---|---|---|
| ascending | roped | fatally injured | Broken Bones (SPECIFY) |
| descending | unroped | seriously injured | _____ |
| on approach | leading | slightly injured | Bleeding (SPECIFY) |
| on return | | unconscious | _____ |

OTHER (BE SPECIFIC!): _____

EMERGENCY TREATMENT GIVEN: _____

_____

WHAT IMMEDIATE HELP IS AVAILABLE? _____

ESSENTIAL ITEMS CARRIED BY THE PARTY (CIRCLE):

| | | | |
|---|---|---|---|
| Flashlight | Matches | Knives | Waterproof Jacket |
| First Aid Kit | Compass | Stove & Fuel | Extra Food or Water |
| Climbing Rope | Ice Axe | Tent or Tarp | Extra Clothes |
| Sleeping Bag | Map | OTHER: _____ | |

NUMBER IN PARTY: ____, PERSON IN CHARGE: _____, TIME BROKE CAMP: ____

WEATHER CONDITIONS (CIRCLE):

| | | | | |
|---|---|---|---|---|
| sunny | overcast | rain | wind | OTHER: _____ |
| snow | lightning | hail | fog | |

TERRAIN (CIRCLE):

snow road boulders talus (rocky slope) steep grass trail

OTHER: _____

NATURE OF HELP NEEDED (CIRCLE):

| | | | |
|---|---|---|---|
| first aid supplies | stretcher | helicopter | food |
| doctor | horse | radios | clothing |
| personnel | vehicle | shelter | water |

OTHER: _____

WHAT CAUSED THE ACCIDENT? _____

_____

IS VICTIM BEING CARRIED OUT NOW? _____ 38 USE BACK FOR NOTES!

## TEN BASIC PRINCIPLES OF FIRST AID

1. Do first things first. Look for and treat at once:
   (a) airway - assure clear airway (tilt head, etc.)
   (b) breathing - check respiration and begin artificial resucitation as needed.
   (c) circulation - check for heart beat (pulse) and begin CPR as needed.
   (d) severe life threatening bleeding
   Other injuries should be cared for by another person or treated promptly by you as soon as the more immediate danger to life is under control. (treat for shock)

2. Keep calm. Don't panic. Decide what to do, then:
   (a) work quickly and gently
   (b) don't show fear to victim
   (c) be quiet and strong
   (d) keep scared or curious people away
   (e) talk to and reassure victim.

3. Keep injured lying down.
   (a) place victim on back
   (b) keep victim quiet, comfortable and warm (don't overheat)
   (c) loosen tight clothes
   (d) put blankets or suitable substitutes under as well as over victim.
   (CAUTION: don't manipulate victim with suspected back or neck injuries)

4. Treat victim where you find him or her:
   (a) if moving is absolutely necessary, splint fractures first
   (b) if you suspect neck or back injuries, never:
      1. let victim sit up or raise or move head;
      2. twist or bend body;
      3. lift by shoulders and heels.

5. Give special care to unconscious persons.
   (a) always hold victim's head tilted way back and pull his/her jaw upward to protect against asphyxia
   (b) remove foreign objects from mouth: false teeth, chewing gum, food, etc.

6. Start artificial respiration at once if:
   (a) breathing stops, slows down, becomes weak or irregular, or if lips and tongue are blue or grey
   (b) never give fluids to an unconscious or semi-conscious person
   (c) if vomiting occurs, turn head to side and clean mouth.

7. Watch for shock.
   (a) any injury can cause shock
   (b) if allowed to progress, it may prove fatal.
   (c) prevent shock - if present, treat quickly: keep flat on back and warm; elevate feet above heart.
   (d) get help
   (e) never leave victim unattended
   (f) give this information to rescuers:
      1. tell what has happened
      2. where victim is
      3. first aid given
      4. ask what to do until help arrives.
   (g) BEST COMMUNICATION IN THE STATE IS THE CALIFORNIA HIGHWAY PATROL:
   ZEnith 1-2000

   OR IN SOME AREAS DIAL "911"

# FIRST AID AT A GLANCE



| AILMENT | SIGNS AND SYMPTOMS | FIRST AID |
|---|---|---|
| 1. Poison | Symptoms vary greatly. Aids to determine whether poison was swallowed:<br>a. Information from victim or observer.<br>b. Presence of poison container.<br>c. Condition of victim (sudden onset of pain or illness).<br>d. Burns around lips.<br>e. Breath odor.<br>f. Pupils contracted to pinpoint size. | Check container for antidote. If none, dilute quickly and induce vomiting (except for corrosive poisons or if victim unconscious or having convulsions), maintain respiration, to preserve vital functions and seek medical assistance without delay. |
| 2. Shock | 1. Skin pale (or bluish), cold to touch and possibly moist and clammy.<br>2. Victim weak.<br>3. Rapid pulse (over 100).<br>4. Rate of breathing usually increases, may be shallow or deep and irregular. | Keep victim lying down. Cover him only enough to keep him from losing body heat; and obtain medical help as soon as possible. |
| 3. Fractures and Dislocations | 1. Pain and tenderness.<br>2. May have difficulty moving injured part.<br>3. Obvious deformities – swelling and discoloration. | Keep broken bone ends and adjacent joints from moving and give care for shock. |
| 4. Burns | Skin is:<br>1. Red – 1st Degree<br>2. Blistered – 2nd Degree<br>3. Charred – 3rd Degree | Pain of first-degree and of a small second-degree burn can be relieved by excluding air. Three ways to exclude air from burn are:<br>1. Submerge in cold water for an hour or two.<br>2. Apply a cold pack.<br>3. Cover with a thick dressing or unused plastic. DO NOT use plastic to keep air off a burn on the face. |
| 5. Heart Attack | Two principal symptoms:<br>1. Acute pain in chest, upper abdomen, or down left arm and shoulder.<br>2. Extreme shortness of breath. | Place victim in comfortable position, usually sitting up. If not breathing, give artificial respiration. Call for medical help and give prescribed medication, if any. Do not give liquids to unconscious victim. |
| 6. Unconsciousness | Unresponsive | Keep victim warm and lying down, head turned to one side. If consciousness is not regained quickly, send for doctor. If breathing stops, give artificial respiration. Never give unconscious person food or liquids. |

## FIRST AID FOR CHOKING

1. Encourage victim's attempt to cough up object.
2. If object remains and victim becomes semi-conscious or unconscious, roll him to one side and strike sharp blows between the shoulder blades. (Fig. 5 front page)
3. If victim is a child, turn upside down and deliver sharp pats as above. (Fig. 6 front page)
4. Give artificial respiration if breathing stops.
5. ALWAYS seek medical help as soon as possible, even though relief is obtained.

## DRUGS AND THEIR ABUSE

In cases of drug abuse emergencies, it is important that the signs and symptoms of the abuse be identified by the individual providing the immediate assistance. The type of drug, plus information on the size and age of the victim and his general condition should be provided to the drug abuse center or attending physician, if possible. For further information on drugs and their abuse, call your local drug abuse center.

Informational booklets on Drugs and Their Abuse are available at your Red Cross headquarters for 5¢ each, plus postage.

FOR INFORMATION ABOUT A FREE FIRST AID CLASS CALL YOUR LOCAL CHAPTER:

GOLDEN GATE CHAPTER

SAN FRANCISCO 776-1500 • SAN MATEO 343-4561 • SEQUOIA 366-3851 • SOUTH SAN FRANCISCO 589-5864

PREPARED BY GOLDEN GATE CHAPTER, THE AMERICAN NATIONAL RED CROSS

TEN BASIC PRINCIPLES OF FIRST AID (CONT.)

8. Treat wounds and burns correctly
   (a) don't touch wounds or burns with fingers or unclean material
   (b) don't breath or cough on wounds or burns
   (c) wrap to keep air off

9. Improvise whenever necessary.
   (a) you may have to use a clean folded handerchief or clean cloth to cover a wound
   (b) for blankets, use clothing, sheets, newspapers
   (c) for splints, use thick newspaper, magazines, pillow, umbrella, board, etc.

10. Have adequate first aid supplies on hand.
    (a) keep a supply of first aid materials, such as well-stocked first aid kit
    (b) replace items that are used up

TO GET HELP

| PHONE | |
|---|---|
| fire | 1. CALIFORNIA HIGHWAY PATROL<br>ZEnith 1-2000 |
| drowning/rescue | 2. COAST GUARD |
| accidents/sickness | 3. DIAL OPERATOR WHEN IN DOUBT. HE/SHE WILL HELP. |

# AUTHORIZATION TO TREAT A MINOR *

I (we) the undersigned parent, parents or legal guardian of

_____, a minor, do hereby authorize and consent for any x-ray examination, anesthetic, medical or surgical diagnosis rendered under the general or special supervision of any member of the medical staff and emergency room staff licensed under the provisions of the Medicine Practice Act or a dentist licensed under the provisions of the Dental Practice Act and on the staff of any acute general hospital holding a current license to operate a hospital from the State of California Department of Public Health. It is understood that this authorization is given in advance of any specific diagnosis, treatment or hospital care being required but is given to provide authority and power to render care which the aforementioned physician in the exercise of his best judgement may deem advisable. It is understood that effort shall be made to contact the undersigned prior to rendering treatment to the patient, but that any of the above treatment will not be withheld if the undersigned cannot be reached.

This authorization is given pursuant to the provisions of section 25.8 of the Civil Code of California.

_____

_____

Date Signature of Father, Mother or Legal Guardian

_____

Address City State Zip

This consent shall remain effective until _____, 19___

---

Birthdate _____ Last Tetanus Toxoid Booster _____

Allergies to drugs or foods _____

_____

Any special medications or pertinent information _____

_____

Telephones where parents may be reached

_____

Father Home Business

_____

Mother Home Business

Family Physician _____

and address _____ Phone _____

Insurance company _____ Policy No. _____



* From San Francisco 4-H Youth Program

# CONFIDENTIAL MEDICAL HISTORY AND INFORMATION FORM



INSTRUCTIONS

(1) Applicant, with Parent or Guardian completes and signs form.
(2) IMPORTANT: Return completed form immediately to trip leader.

## GENERAL INFORMATION

(1) Trip for which you are applying_____

(2) Name_____

(3) Home Address_____
Number Street City State Zip Code

(4) Home Telephone_____ (5) Birthdate_____
Area Code No. Month Day Year

(6) Present Age_____ (7) Today's Date_____
Years Months Month Day Year

(8) Male_____ Female_____ (9) Height_____ Weight_____

(10) Family Physician_____

(11) Physician's Address and Telephone_____

(12) Person to be Notified in Case of Illness or Injury_____
Name

Address_____ Home Telephone_____

(13) Business Telephone_____ Relationship_____

## MEDICAL HISTORY

(1) Name any illness or condition for which you are now under treatment and list any medications you are currently taking_____

(2) Date of last dental treatment_____ Name of Dentist_____

(3) If you have had any of the following illnesses, state year of occurrence:

Arthritis_____
Asthma_____
Chickenpox _____
Colitis_____
Cystitis_____
Diabetes_____
Epilepsy or Convulsions_____
Gall Bladder Disease_____
Heart Disease____
Hepatitis or Jaundice_____
Mononucleosis_____
Maleria_____
Meningitis_____
Mumps_____
Pleurisy_____
Poliomyelitis_____
Rheumatic Fever_____
Tuberculosis____
Typhoid Fever____
Ulcer (Stomach or Duodenum)____

(4) If you have had any of the following, state the year of occurrence:

Hernias_____ Dislocations_____ Fractures_____

Concussions_____ Sprains or Strains_____

(5) Name any injuries, illness or disabilities not mentioned and year of occurrence:_____

(6) If you have ever been hospitalized, state:

| Date | Name and Location of Hospital | Illness |
|---|---|---|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

If you have now, or have had, any of the following symptoms or conditions, please circle "Yes", underline and describe the problem. If not, circle "No".

1. Dizziness, loss of consciousness, or recurrent headaches..... Yes.....No
2. Eye, ear, nose, throat or sinus symptoms..... Yes.....No
3. Impairment of sight, hearing, or speech..... Yes.....No
4. Chronic cough or coughing up of blood or close contact with tuberculosis..... Yes.....No
5. Chest pain, shortness of breath, palpitation, swelling of ankles, heart murmur, high blood pressure..... Yes.....No
6. Leg cramps, varicose veins or varicose ulcer..... Yes.....No
7. Sensitivities (allergies) to horse serum (tetnus antitoxin), sulfa, penicillin or other drugs, or other allergies..... Yes.....No
8. Troublesome skin conditions..... Yes.....No
9. Loss of teeth (indicate number of false teeth)..... Yes.....No
10. Symptoms related to the gastrointestinal tract, for example: recurring abdominal pain, diarrhea, passing of blood, etc..... Yes.....No
11. Albumin, sugar or blood in urine; kidney stone or other urinary difficulties..... Yes.....No
12. Muscle, joint or back pain, bursitis, sciatica..... Yes.....No
13. Benign or malignant growth or tumor..... Yes.....No
14. Menstrual cramps - severe..... Yes.....No

Give details in regard to any of the above questions from 1-14 which you have circled "Yes".____

_____

_____

List any medicines to which you are allergic:_____

_____

List any other allergies (insect bites, bee stings, etc._____

(8) Do you smoke? Yes ( ) No ( ) If so, how much?_____

CONFIDENTIAL MEDICAL HISTORY AND INFORMATION FORM (cont'd.)

(9) Immunizations and Tests:

Check which immunizations have been given and the dates administered:

A. Tetanus_____ DPT_____ Smallpox_____

Typhoid_____ Polio_____

Free tetanus, DPT and Polio boosters can be arranged through the county Dept.

B. Date last chest X-Ray, if any_____ Results_____

(11) Is the applicant now under treatment of a psychiatrist?_____ If yes, give psychiatrist's name, address, phone number_____

_____

Has the applicant attended a psychiatric clinic in the past? If yes, give general details._____

_____

(12) Give description of any problems of applicant arising from the misuse of drugs:_____

_____

I fully understand the occasionally vigorous nature of a backcountry trip. In the event of an emergency, permission is given for any operation and/or anesthesia which might become necessary.

_____

(Parent/Guardian print name here)

_____

(Parent/Guardian Signature)

Date:_____

from Outward Bound Schools
San Francisco 4-H Youth Program
Cooperative Extension-University of California
June 1979

EMERGENCY PHONE NUMBER LIST - To be filled out and carried in First Aid Kit(s).

Location of Trip or Expedition: _____

Location of nearest town(s), city(ies) or phones: (pay phone, home phone)

_____

Name and Phone number of nearest doctor, hospital or medical facility:

_____

_____

Name and phone number of nearest county sheriff's department:

_____

Name and phone number of nearest state or federal park station:

_____

Name and phone number of nearest national forest headquarters:

_____

Name and phone number of immediate supervisor of organization:

_____

Phone number of California Highway Patrol emergency: ZEnith 1-2000
Ask operator to dial.

## VEHICLE TRAVEL - GENERAL SAFETY *

1. Motor Vehicles are one of the greatest killers. Drivers shall adopt a policy of defensive driving.

2. Drive so as to avoid accident situations created by the mistakes of others or by weather or road conditions.

3. Yield the right of way even when, by all rules of the road, it is actually yours.

4. Make an unbroken series of concessions to other drivers who are thoughtless, unskilled or ignorant of the hazards they create.

5. Be especially courteous to pedestrians. Honor their right of way privileges. Watch particularly for erratic behavior of children, the elderly, and those who have been drinking.

6. Expect reckless, illegal, and clumsy behavior on the part of other drivers and prepare to adjust driving to avoid accidents.

7. Drive at a speed that permits full control of the car, allowing for all factors such as posted speed limits, stop signs, weather, visibility, traffic and road conditions, and safe stopping speed.

8. On narrow roads either surfaced or unsurfaced and blind curves, keep well to the right and be able to stop the vehicle within less than half of the visible distance.

9. Reduce speed when driving on hard-surfaced roads which are wet. The front wheels of a vehicle begin to hydroplane at 50 m.p.h. and lose contact with the road.

10. When running the motor of a parked vehicle to provide heat, open a window at least 6 inches.

11. Only leave a vehicle that is stalled within traffic lanes when there is greater danger involved in remaining. Signal intention by waving handkerchief or bright cloth. Go to near edge and stay there until help arrives.

* Adapted from Forest Service - Health and Safety Code.

## VEHICLE INSPECTION/TRAVEL FORM

To be completed before any long distance trip by driver, staff, or designee.

License Number _____ Date _____

Destination _____ Odometer Start _____

EQUIPMENT: Odometer Finish _____

_____ First Aid Kit present? Total _____

_____ 3 Flares/Reflectors

_____ Appropriate Maps present?

VEHICLE CHECK

_____ Gasoline?

_____ Oil?

_____ Water?

_____ Windshield clean?

_____ Side mirrors clean?

Lights working?

_____ Headlights

_____ Tail lights

_____ Brake lights

_____ Turning lights

_____ Warning lights

Tires Pressure/Condition

___ _____ Right front

___ _____ Left front

___ _____ Right rear

___ _____ Left rear

___ _____ Spare

Brakes working?

_____ Pedal firm

_____ Stopping action

_____ Condition of Windshield Wipers

_____ Equipment being carried secure?

_____ Horn in working order?

Insurance:

Company: _____ Policy Number: _____

Coverage: Personal Injury _____

Property _____

Liability _____

Comments:

48 _____ / /

Signature of Inspector Date

GARDEN - GENERAL SAFETY *

- Participants should notify instructor if they should notice any unsafe conditions or implements.
- Any participant violation of the safety rules should be reported to instructor to prevent any serious injury.
- Playing or scuffling, sometimes referred to as "horseplay" is extremely dangerous because personal injury often results to the participants or innocent by-standers.
- Paths and work areas must be kept clear of debris and tools at all times.
- Running is not allowed in the garden area. Participants should walk in paths to their assigned work areas and should not cut across paths or planted areas.
- The throwing of clods or rocks can cause serious injury. Throwing of such objects is strictly prohibited.
- The throwing of tools is strictly prohibited.
- Participants are not allowed to climb over fences, bins, or other structures.
- The correct methods of lifting must be strictly observed. Serious injury can result from improper lifting. If an object seems too heavy to lift, get help before attempting to lift or move it.
- Participants should not drink from garden hoses. The hoses might have been contaminated by insecticides or dangerous fertilizers that have been siphoned through it.

* Adapted from the Community Environmental Education Program, Jefferson High School, Daly City, California.

GARDEN SAFETY TEST *

True or False

1. All injuries should be reported to the instructor.
2. Running is allowed in the gardening area.
3. Throwing objects is allowed in the gardening area.
4. Serious injury can result from improper lifting.
5. Students can drink from garden hoses.
6. Sharp tools should never be carried in your pockets.

Completion

7. All garden tools should be carried how high? ans. below knees.
8. How should shears be stored? ans. with blades closed or locked.
9. How should hoses be stored? ans. coiled.
10. Why should all injuries be reported to instructor? ans. because any injury could be a serious injury.
11. Why should sharp objects be removed from soil? ans. they could cause injury to any participant working in soil.
12. Why should all tools, equipment and debris be removed from paths and work areas? ans. Because they provide a danger to anyone walking in area.
13. What often results from horse play? ans. injury to participants and by-standers.
14. How may you be hurt from handling an improperly loaded wheelbarrow? ans. if too heavy or lifted wrong can cause back injuries.
15. Why must potting cans be handled carefully? ans. may have sharp edges which can cut hands.
16. What dangers are involved when carrying tools on your shoulders. ans. someone behind could get injured.
17. What might happen if you leave a rake with the tines facing upward on the ground? ans. someone may step on it and cause it to snap up into face or body, causing injury.
18. Why should only one tool be removed from the rack at a time? ans. excess tools may end up laying around, causing a tripping hazard.

GARDEN SAFETY TEST (continued) *

19. What danger is involved from drinking from a garden hose? ans. insecticides or dangerous fertilizers may have been siphoned into them.

20. Which end of the tools hould be down in a storage rack. ans. sharp end.

21. When working with soil and plants, an open wound may result in what? ans. a seriously infected wound.

22. Why is one student assigned to the duty of getting all tools from shed? ans. area could become crowded and injury could result.

Practical

Students should be able to indentify and exhibit proper use of following:

| | |
|---|---|
| Square pointed shovel | Bow rake |
| Rounded pointed shovel | Leaf or grass rake |
| Spade with D handle | Hand trowel |
| Spading fork | Lopping shears |
| Cultivator | Hedge shears |
| Standard garden hoe | Hand pruning shears |
| Scuffle hoe | Grass shears |
| Warren hoe | Pitch fork |
| Wheelbarrow | Mattock or pick |

* Adapted from the Community Environmental Education Program, Jefferson High School, Daly City, California.

## HAND TOOLS - GENERAL SAFETY *

1. Observe these guiding principles when using tools:

    a. Select the right tool for the job.
    b. Maintain tools in good condition.
    c. Use the proper tool correctly.
    d. Keep tools in a safe place, both on the job and in storage.

2. Guard or sheath sharp-edged tools when they are carried to and from the job.

3. When using or carrying handtools, keep at least 10 feet from other workers. Carry tools on the downhill side.

4. When not in use, place tools against a wall, bank, stump or lay down in plain sight, with sharp edges down.

5. Participants shall not throw tools.

6. Discard wornout tools. Seperate those tools needing repair or sharpening from those ready for use by tagging or locking up.

7. Inspect tools for proper condition before use or storage.

8. Construct racks and bins for tools so that participants cannot fall on or collide with sharp edges and so that tools cannot fall out.

9. Instructor or assigned staff shall be present when participants are using tools.

* Adapted from Forest Service, Health and Safety Code, 1970

## KNOTS, ROPES AND SLINGS

### *Ropes - Specific Rules

1. NEVER walk on a rope.
2. The rope should not be dragged along the ground. Small rock crystals and fragments will work their way between the fibers and slowly cut the rope in a way that is not visible from the surface.
3. Do not allow the rope to run over sharp edges if it can be avoided, especially if it is under a heavy load.
4. Do not store near radiators or other sources of heat, or in a dirty car trunk. Do not hang on sharp nails.
5. Keep the rope reasonably dry, if possible. Dry before storing.
6. Do not leave a rope stretched or under tension for any extended period of time.
7. Remove all tight knots after using and before storing.
8. Do not use a climbing rope stretched or under tension for any extended period of time.
9. Completely examine a rope immediately after it has held a fall of 20 feet or more.
10. Examine the rope at regular intervals. If puffs of fiber are observed at any point along the line, RETIRE the rope. On a climb, a butterfly knot may be tied to isolate the damaged section in its loop.
11. Examine the rope immediately after it has been hit by a falling rock, no matter how small. If a sudden strain has been placed upon the rope while passing over sharp edges, examine.
12. Except for the ends, DO NOT mark other parts of the rope with lacquer or paints. Lacquer softens the fibers and causes them to bind together.
13. Instructor is to check all knots and tie in's.

*Knots

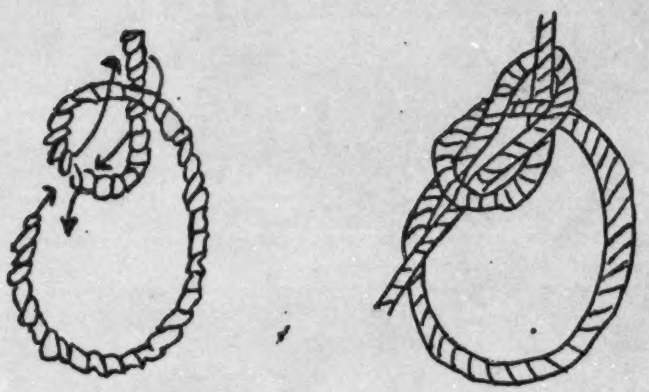

Figure 1. Bowline Knot

Knots (cont'd.)

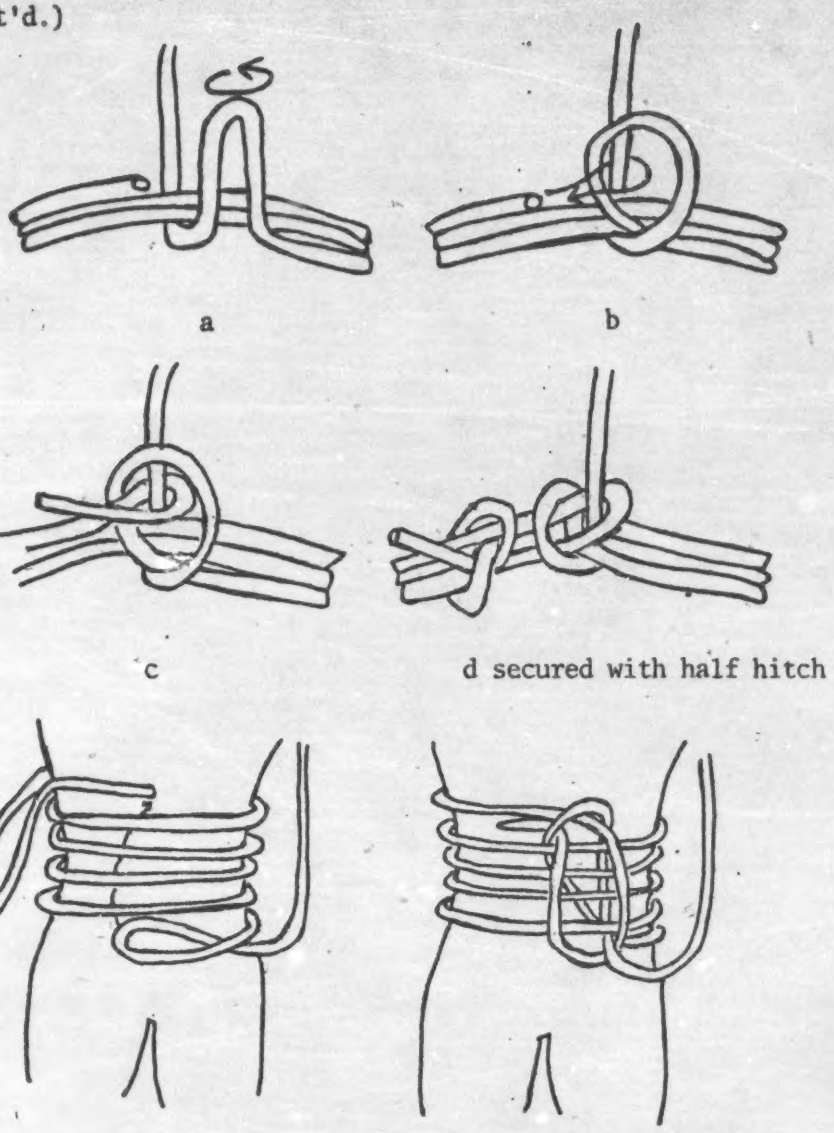


Figure 2. Bowline on a Coil (after Wheelock) to be used for belay.

OR:

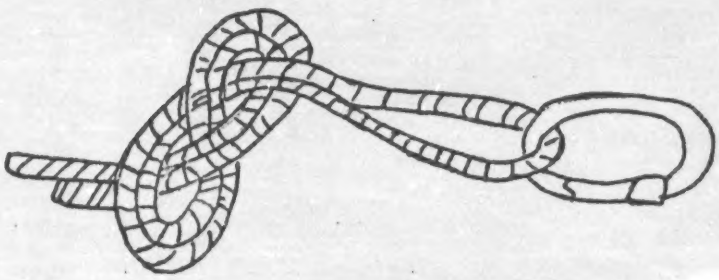

Figure 3. Figure Eight Loop (Figure Eight-On-A-Bight) clipped into a locking carabiner. Carabiner to be clipped into a webbing Bowline on a coil (Swami Belt) on climber for belay.

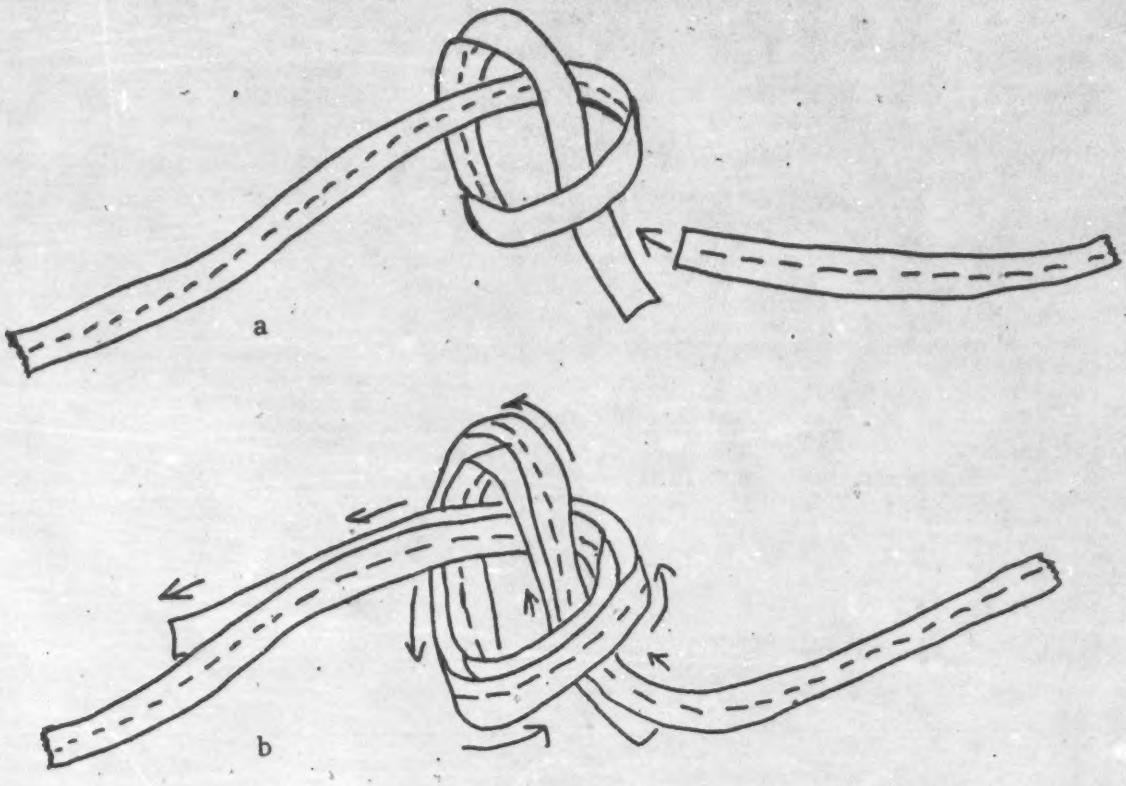


Figure 4. Ringbend Knot (Water Knot) for finishing Swiss Seat.

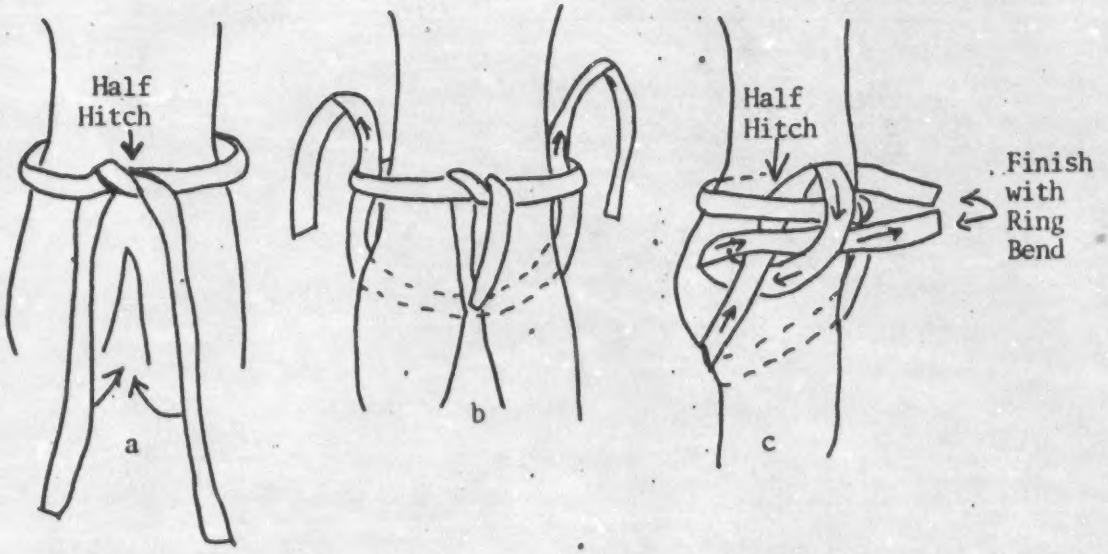


Figure 5. Swiss Seat finished with Ring Bend for Rappelling.

## CLIMBING LOG

To be filled out each time rope is used. Maintain seperate log for each rope.

Rope Identification Number or Color: _____

| DATE | ACTIVITY | # PERSONS USING | KNOTS TIED |
|---|---|---|---|
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# CLIMBING, RAPPELLING, BELAYING - SIGNALS AND PROCEDURES

## CLIMBING CLASSIFICATIONS

(Adopted from "Basic Mountaineering" ... Sierra Club)

CLASS 1. Walking upright - no special footgear required.

CLASS 2. Rock scrambling - use of hands for balance and proper footgear.

CLASS 3. Climbing steeper ground and rocks - proper climbing technique required. Exposure not sufficient to rope, although one should be available, and beginners should use it.

CLASS 4. Climbing where the exposure is increased - rope required. Pitons should be carried because the security of belayer may require their use for anchoring.

CLASS 5. Climbing where the route is difficult and the exposure severe - placing pitons by the leader as he proceeds is required.

CLASS 6. Climbing where holds or cracks in the rock are not adequate - direct aid is needed. Pitons and bolts are used in connection with stirrups and tension.

The Sierra Club system generally grades the difficulty of a climb. But many climbers feel that this system does not fully explain the amount of difficulties that can vary on any one pitch. Therefore, they have added a decimal system starting on .0 and continuing up in degree of difficulty. Example: a 6.3 or a 5.5 climb.

---

## BASIC ROCK EQUIPMENT

1. ROPE: Goldline or Perlon, used for safety purposes in climbing or descending the rock. Also aids and assists the climber. Breaking strength usually 5,000 lbs.

2. GLOVES: Used for protecting the hands while rope handling and rappeling.

3. CARABINERS: Steel alloy rings, with opening gate. Used for climbing, anchoring points, and rapelling.

4. RAPPEL SEAT: Fastened around your waist and through your legs, used in descending the rock.

5. WAIST SLING: Tied around the waist for safety purposes. Then secured to the belay rope.

6. HARD HAT: For protection of the head against falling rocks or crashing into the rock in a fall.

## CLIMBING

There are three major categories of rock climbing:

FACE CLIMBING: Climbing on an exposed rock wall or face which is at a vertical position. Using hand and foot holds to make your ascent.

SLAB OR FRICTION CLIMBING: Climbing on a rock face which lies at or near 45 . No hand holds are actually available, so the climber relies on pure friction alone.

FISSURE CLIMBING: Using cracks in the rock face which run horizontal or vertical and hand holds are unavailable. Climbing is attained by using your limbs in the cracks and applying pressure.

If the body is not in a vertical position, it will fall over. The beginner has a tendency to hug the rock rather than stand up straight. He believes that by hanging on with his hands, he can't fall over because he is holding his upper torso to the rock. But the fall begins at the other end and your feet will go out from underneath you.

It is essential that your weight be directly on your feet. The weight concentrated in one area produces greater friction and stability.

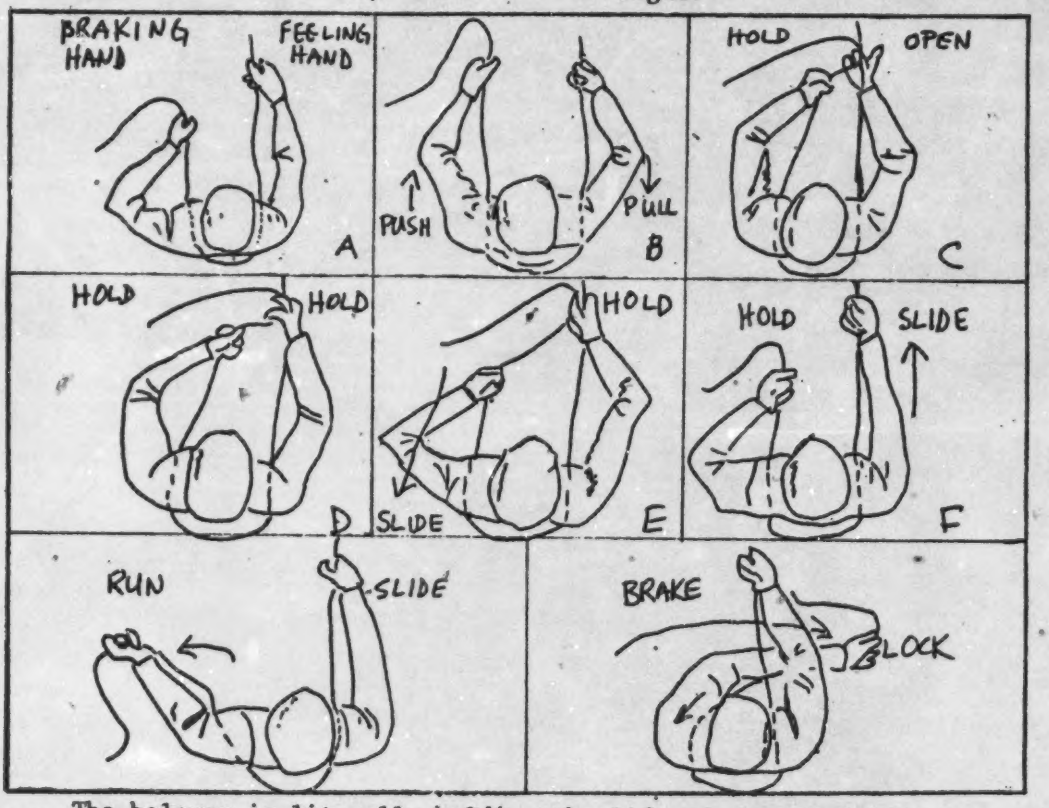
The hands in most cases will be used for balance and stepping up rather than pulling yourself up.

The testing of holds may be done by feel. There is no way to determine whether or not it will hold your body weight. It can be done most accurately by hitting the rock with your palm or foot, or simply applying pressure to it. Loose rocks are not always bad holds. In many cases, the direction of pull or pressure may anchor the rock to your satisfaction.

In fissure climbing, the hands and feet are used by wedging them into the cracks and applying pressure at different points. These points are such, your knuckles, fists, elbow, fingers, and shoulders, also, toes, foot, toe and heel together, legs, knee and sometimes your whole body, to work your way up the fissure.

## BELAYING

Belaying is derived from a sailing term. Large wooden pins were mounted on shipboard. When a heavy sail was to be lowered, the lowering line was wrapped around these pins. The weight of the canvass was absorbed in the friction of the line around the pins. A single man could control the descent of a sail many times his own weight.




The belayer is literally holding the life of the climber in his hands. The belayer must be able to devote all his attention to the climber. He should be certain that his belay position is both safe from falling rocks and comfortable. Neither should the belayer allow the activities of other climbers to distract him. When taking in the rope, the belayer uses a method that allows him to do so without removing the braking hand from the rope.

## SIGNALS

The following signals are to be used for rock climbing/rappelling in this program. Climber is to be tied in with a bowline on a coil or with a swami belt clipped into a figure eight. Rappeller is to be belayed and clipped into rappell rope with Swiss seat finished with a ring bend. All calls are to be shouted!

| | |
|---|---|
| ROPE! | Means belayer is throwing rope over rock. |
| ON BELAY! | Called by climber to tell belayer he is tied in. |
| BELAY ON! | Called by the belayer to let the climber know that he is tied in and ready to protect him on the climb. |
| UP ROPE! | Called by climber if there is a lot of loose rope he wants pulled up before he begins climb. |
| IS THAT YOU! | Called by belayer to be sure that the tension he feels on rope is the climber and not a snag. |
| THAT'S ME! | Called by climber to let belayer know he feels tug on rope. |
| CLIMBING! | Called by the climber to warn his belayer he is ready to climb. |
| CLIMB! | Called by the belayer to tell climber to climb. |
| TENSION! | Called by the climber when he wants the rope particulary tight so he can put his weight on it. |
| SLACK! | Called by the climber when the rope is too tight and he wants it loosened a little or when he wants to go back down a little. |
| FALLING! | Called by the climber to give the belayer warning that he is falling and to be prepared to hold his full weight. |
| ROCK! | Shouted frantically to warn those below to take protection from <u>any</u> falling object. |
| OFF BELAY! | Called by the climber to let belayer know he is done with climb and is off belay. |
| BELAY OFF! | Called by belayer to let climber know he is no longer ready to protect him. |

Rappelling Signals are:

| | | |
|---|---|---|
| ROPE! | TENSION! | OFF RAPPELL! |
| ON BELAY! | SLACK! | RAPPELL OFF! |
| BELAY ON! | FALLING! | OFF BELAY! |
| ON RAPPELL! | ROCK! | BELAY OFF! |
| RAPPELL ON! | | |

## PRE-TRIP CONDITIONING

Though well within the physical limits of everyone, any backpack trip is strenuous. It will be much more enjoyable and much easier if you are in good shape. The following minimum conditioning program should begin now and should be kept up until your trip begins.

1. Do at least five push-ups, morning and night (more if possible).
2. Do at least five chin-ups, morning and night.
3. Do at least 25 sit-ups, morning and night.
4. Jog or run at least one mile each day.
5. Begin cutting down on smoking, and, if over-weight, on eating.
6. Walk whenever possible and at a brisk pace. Climb stairs instead of using the elevator.
7. Foot Care - Be sure your boots fit properly and are well broken in. Trim toenails several days before trip. Take care of any hangnails, bad callouses, etc. Blisters are the number one medical problem on backpack trips.
8. Dental Care - A dental check is advisable. You may be a long way from a dentist.
9. Medical check-up recommended for all before an extended trip especially into higher elevations.



revised by Jim Brenner and Reno Taini
Cooperative Extension - University of California
San Francisco 4-H Youth Program

## EXPEDITION ITINERARY FORM



_____
Name of Program

_____
Organization Address

Trip Title: _____

Trip Location: _____

Trip Dates: _____ through _____

STAFF: _____

TRANSPORTATION: _____

EQUIPMENT PROVIDED BY: _____

FOOD OBTAINED THROUGH: _____

ACCIDENT INSURANCE THROUGH: _____

ITINERARY

| DAY/DATE | FROM | TO |
|---|---|---|
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Any emergency messages can be relayed via (Name, location and phone number of ranger station, headquarters, etc.) _____

The (Name of Station, etc.) has been apprised of our itinerary as part of our emergency procedure.

If for some reason, we have not returned by (Time, day, date) _____, you may contact (Organization name, person, phone number) _____, whom we will have contacted regarding our situation.

## ACCIDENT - NEAR-MISS FORM

To be filled out completely:

- Whenever, in the instructor's opinion, a medical problem has a significant effect on a student's participation (i.e. severe blisters that make hiking difficult).
- Whenever a student receives medical attention from someone other than the instructor.
- Whenever an incident occurs which does not result in injury, but reveals a potential safety problem (a "near-miss").

INSTRUCTOR:_____ DATE:_____ TIME:_____ a.m./p.m.

NAME(S) PARTICIPANT(S) INVOLVED:_____

ACTIVITY INVOLVED:_____

DESCRIPTION OF INCIDENT:_____

RESULTANT INJURY (IF ANY):_____

PHYSICIAN NAME, ADDRESS, PHONE:_____

FIRST AID TREATMENT GIVEN:_____

ACTION TAKEN TO PREVENT REOCCURRENCE:_____

SUGGESTED PROCEDURE/POLICY FORMULATED:_____



_____ / /

Signature Date

## ABOUT BACKCOUNTRY LEADERSHIP

The less experienced the youth group, the more experienced the Backpack leader should be. With proper organization and proper management the work should be efficiently handled and the safety and enjoyment of the participants will be maximized.

The leader should plan, schedule, and analyze in advance the area, terrain, and weather regarding the trip. Above all, he must examine the physical capabilities of those he plans to lead.

The responsibilities are many. The best and safest routes must be known, equipment must be checked, first aid must be administered, camp craft must be supervised, and safe transportation must be arranged.

Once the trip schedule is planned he must give instructions in a firm and certain manner.

The following list includes only a few of the responsibilities of a competent leader:

BEFORE LEAVING:

1. Choose an assistant leader and other help.
2. Be informed of or familiar with the travel area.
3. Procure up-to-date maps of the area.
4. Set a minimum and maximum number of people wanted on the trip.
5. Inquire into the physical capabilities and limitations of every member.
6. Provide a required list of personal equipment to each member and check his gear before leaving.
7. Inform at least one responsible person of the exact trip location, transportation used, trip schedule, estimated time of return, number in the party, equipment carried, experience of the leader, and emergency plans. (Someone in town and available.)
8. Aquire fire permits, camping permits or any special permits to trespass on private or government property.
9. Acquire necessary minor releases and obtain insurance required by your organization.
10. Plan and map several safe routes by avoiding potential hazard areas (avalanche, rockfall, etc.).
11. Carry only first class equipment, whether it be new or used.
12. Plan transportation to and from the area.
13. Plan for delays. Arrange for responsible people to advise companies, bosses, schools and parents in the event of unavoidable delay. Arrange for someone to feed the dog and milk the cow, and eliminate the necessity of having to meet a deadline.

BEFORE LEAVING THE CARS:

1. Pinpoint your location on the map. Make notes of landmarks and establish a base line to help your return trip. Do this with several members of the party.
2. Check with local authority as to trail changes or area restrictions.
3. Sign out with local authority (Ranger, Forest Service). Leave a schedule in the car window if no authority is near.
4. Remind the party of trail rules (smoking, use of alcohol, littering, trail etiquette) and rescue procedures.
5. Park cars clear of roads and trails and be sure they can get out in case of emergency. Do not block the way for snow removal equipment.

Before the group gets under way, have a tentative evaluation of the capacity of the individuals, and also the suitability of their clothing and equipment. Be prepared to make the difficult choice between excluding those unqualified and modifying the planned itinerary. Appoint a person to be rear guard.

Keep the party together and have a head count often. Be alert for the wanderer. Know just how many are on the walk, checking occasionally, especially at the end.

Call short rest stops for equipment adjustment, water and energy intake, and nature calls. While stopped, verify your position on the map. The group will be interested in looking at maps of the area, such as a guide book and topographic quadrangles, to know where they are going. Choose the best route for the party. Never take the group beyond the capabilities of the individuals - mental or physical. Problem areas may require a change of route.

Be alert for physical condition changes of individuals, such as fatigue, injuries, sunburn, blisters, etc. Here you must be both doctor and psychologist.

Make allowances for the weather, as extreme heat, snow, etc., may slow the party. Also consider the size of the group, because often the larger the party the slower the hike. Watch the weather. If it turns bad, camp: turn back: get shelter. With lightning get off ridges and hills.

Teach as you travel (map, compass, campcraft, Safety, First Aid, etc.). Instill confidence in the party members by doing the right things and making good decisions (not always alone).

Remember, your enthusiasm for the trail, the area, and the people is contagious. Remind the group to take their litter home. Burying tin cans and bones is Unsatisfactory because animals dig them up.

Make it clear that no one is to leave the group to go ahead, stay behind or explore without your permission. Anyone who persists in going his own way can be told in front of others that he is on his own. A responsible hiker who knows the area well should be asked to bring up the rear.

The leader or the rear person must have a first aid kit. Important items are: Moleskin, aspirin, salt tablets, gauze pads, tape, bandaids, and a plastic bag to keep dry. (Splints, etc. can be improvised if needed.) The kit might also include antiseptic, tweezers, safety pins, a snake bite kit and emergency blanket.

At all junctions, hold up the party until the last man is in sight, or ask one person to wait to direct the route. Call attention to all hazards such as barbed wire, poison oak, etc., and see that the information is passed back down the line. Advise each hiker to keep the hiker in back of him within sight at all times. If anyone is not able to do so, ask the group ahead to slow down.

## LEADERS' RESPONSIBILITIES AT CAMPSITES

Camp organization
Latrines
Pure water
Safe fire
Safe food protection (sun, animals, weather)
Enforce proper use of axes, saws, boats
Safe shelters (watch for flash flood, avalanche or rockfall areas, dead snags, fire, lightning, wind, rain)
Good outdoor ethics (moral obligation to the young to set a good example)
Keep the party together (no evening hiking alone).
Always use proper hiking techniques, good judgement in decisions, proper language in instructing the young.
Teach others about safe outdoor travel and the wonders of nature that abound around them during their journey.

## LEADERS' RESPONSIBILITIES BACK AT THE CARS

Tally members of the party; are you still all together?

Inspection, repair and storage of all equipment. Note damaged or missing gear.

Sign back in with proper authorities that you have returned; give them reports on trail conditions, camp conditions, and potential dangers noticed.

## LEADERS' RESPONSIBILITIES TO THE ORGANIZATION

Report to parents any injuries, equipment loss, merits of young members of the party.

Report to the organization's authorities on the completion of the trip, problems encountered, recommendations for future trips, number of persons in the party and conduct.

Jim Brenner and Reno Taini
San Francisco 4-H Youth Program
Cooperative Extension - University of California

## SPECIAL EQUIPMENT FOR THE TRIP LEADER

## IN ADDITION TO PERSONNEL GEAR AND THE LEADER'S SHARE OF GROUP GEAR AND FOOD - YOU MAY WISH TO CARRY THE FOLLOWING ITEMS FOR VARIOUS REPAIRS AND EMERGENCIES:

Flexible wire saw
Pliers
Clevis pins and Retainer rings (for packs)
4' - Baling wire
Tape (Masking or "Mystic" is good)
Headlamp (with spare bulb and batteries)
Darvon (for severe pain relief)
Dexedrine - 5 mg. (only postpones needed rest - use cautiously)
Alarm clock (to stretch those days out)
Rain suit (light weight)

### FOR SURE EACH LEADER ALONE WITH A GROUP SHOULD HAVE:

Map(s) - including peripheral areas
Compass
Matches and Candle
Whistle
Signal Mirror
Notebook, pen and pencil
Nibble food - extra high-energy
Standard First Aid Kit
First Aid Booklet - Mountaineering Medicine by Fred T. Darvill, Jr. , M.D. is a very good one!
Medical Information Cards - for everyone in your group.
Emergency phone number - for participants - for Sheriff - ranger - hospital
2 dimes, 1 nickle, 1 quarter - call operator and explain emergency; have operator place needed calls.

### FOR POSSIBLE USE BY OTHERS, IF NEEDED:

Insect repellent
Suntan lotion
Safety pins
Salt tablets
Aspirin
Extra pair of socks
Small Flashlight

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Patrol Leader(s):_____

_____

_____

Patrol Equipment

Each patrol will receive the following group equipment for this backpacking experience:

1. Cooking Gear:_____

_____

2. Large Plastic Shelter Sheets (approx. 10' x 12')_____

3. First Aid Kit (check for complete supplies and accident report forms. List of supplies in each kit)_____

_____

4. 50 ft. Nylon cord

5. Garbage bags, 6-8

6. Maps_____

7. Compasses_____

8. Scrubbers_____

9. Stove Kit(s)_____

10. Shovel_____

11. Water Container_____

12. Climbing Gear_____

_____

13. Food share_____

_____

_____

14. Other_____

_____

_____

Issued by:_____

Received by:_____

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# PERSONAL EQUIPMENT LIST (BACKPACKING)

The following list of items are found normally at home.

This list is only to help you pack properly.

Each member of the backpacking group carries his PERSONAL GEAR plus his share of common food and group equipment.

## WEAR

____Pair of comfortable hiking boots
____Two pair of wool socks (One heavy and one thin)
____Comfortable, strong pants (wool preferred)
____Wool sweater or warm jacket
____Belt, strong
____Waterproof poncho or rain gear
____Wool hat (If not worn, have readily available in pack.)

## CARRY IN POCKETS

____Handkerchief (can be worn around neck)
____Jackknife
____Matches in waterproof case or waterproofed
____Compass
____Whistle
____3 or 4 Band-Aids
____Individual toilet paper in plastic bag
____Wallet (include dimes for phone calls)

## TOP OF PACK OR OUTSIDE POCKET

____Pair of extra wool socks
____Mess Kit with spoon and fork
____Canteen (full)
____Cup
____Bowl
____Candle
____Flashlight (tiny, with spare bulbs and batteries)
____Rope, nylon (50 ft.)
____Poncho (if not raining)
____Repair Kit containing
    ____Large Garbage Bags (2-3)
    ____Rubber bands
    ____Safety pins
    ____Needle and thread
    ____Shoe laces
    ____Extra plastic bags
    ____String
____Candle
____Food (according to space, strength, etc.)
____Group Equipment (your share)

## INSIDE YOUR PACK

____Plastic ground cloth
____One pair of sneakers or mocassins
____Plastic clothes bags containing:
    ____extra pants
    ____extra shirt
    ____extra socks (one change only)
    ____extra underwear
    ____thermal underwear
    ____shorts or "cut-offs"

## TOILET KIT CONTAINING

____Washcloth
____Comb
____Biodegradable soap in waterproof container
____Bath towel
____Toothbrush
____Toothpaste
____Chap stick
____Insect repellent
____Personal hygiene items (e.g. - tampax, etc.

## STRAPPED TO FRAME

____Sleeping bag
____Ensolite pad

## OPTIONAL ITEMS

____Notebook and pencils
____Watch, camera, film, books
____Sunglasses
____Bathing suit
____Suntan lotion

NOTE: Wool pants, shirts, sweaters and sox are required for winter trips.



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## GASOLINE STOVE CARE AND OPERATION (Adapted from: The Climber's Sourcebook)

### Safety

When cooking outside, clear the area around the base of the stove to prevent a possible fire. Make sure the base of the stove is secure and will not easily tip over.

When cooking in a tent, make sure that the tent is well ventilated. The carbon monoxide from a cook stove can cause nausea and in extreme cases, even death. NEVER cook inside unless forced by the elements.

### Starting: preparatory

All of these stoves need a small amount of pressure to start; a larger amount to operate and cook. The greater the pressure, the hotter the flame will be. Pressure is created by significantly raising the stove's temperature, so, insulate the stove from ground, wind, cold, etc.

When using a small amount of gasoline to start your stove, exposing this fuel to the air means you'll have to act fast to get sufficient flame for heating (to beat evaporation time).

Carefully regulate the flow of gas at all times: unless there's a specific, limited reason to have the valve on, then keep it off. Leaving it on when starting will cause premature pressure loss. Build pressure, don't lose pressure.

Have plenty of book matches on hand for use in starting.

After preheating - including lighting the priming fuel - the first of three phases of ignition has then begun. Learn the following three stages of fuel flow with corresponding combustive symptoms:

Stage 1:
The first spurt of liquid only; some collects in spirit cup below. If stove is ignited at this stage, it is premature and the resulting yellow flame may contribute to carbon clogging.

Stage 2:
The fuel flow is now between liquid and vapor. You will hear a hissing which alternates with the liquid spurt. Ignite burner head of stove here. Flaring orange flame will alternate rapidly with the desired small blue flame.

Stage 3:
If the flame were to go out at this point, you would hear a hissing noise only, representing a steady flow of vapor. Merely reignite. Combustion at this stage is blue only, with characteristic roar. Put on the pot!

Starting your Stove

1. Prepare space or stable platform for the stove. Have food or water in pot nearby, ready for cooking. Unfold or take off windshield as need be for access.

2. Unscrew tank cap to release possible vacuum from previous operation. Rescrew tank cap and tighten with wrench.

3. Cap is tight; valve is off.

4. Using eyedropper or special fuel bottle spout-cap (better), pour fuel as follows:

   SVAE 123 and Optimus 80 - into burner head from top, allowing extra fuel to flow down the vaporising tube, only a small amount collecting in the cup below.

   8R - same, but fill cup part way.

   111B - a few pumps will cause spurt, with which cup is to be filled part way.

   111 and other kerosene stoves - follow instructions - for using alcohol as priming fuel - that come with stove. A kerosene stove may also be primed with gasoline or in an emergency with toilet paper soaked in kerosene. Try to learn the optimum amount of priming fuel to use.

5. With valve off, quickly ignite and wait until flame is almost out. Turn valve open and quickly ignite burner tip. Stove should now be at stage two or better. If not, shut off and try again.

6. Instantly put your food or water on for heating.

Overheating

All stoves are made (and specially vented also) for a plateau of continuous, relatively high heat and pressure. Significantly above the plateau on all gas gasoline stoves, the safety valve in the tank filler cap will give way to release the overpressure. As what is released is vapor, it can be counted on to ignite and the resulting mass of shooting flame is understandable cause for concern. Leave the stove itself alone for fifteen to twenty seconds, doing nothing except to prepare yourself to lunge with key in hand to turn off the burner head flame. In this time the pressure may be sufficiently relieved for the safety valve to turn off. If not, then extinguish the burner head flame and vigorously blow out the flame coming from the safety valve. It will continue to hiss now, but with no flame present, cooling begins instantly. Causality for this blowing off can be found in too much heat or lack of venitlation creating too much heat, or blocking or clogging that would cause too much pressure. It is important that large pots not be allowed to hang over the tank of 111B and 8R. They reject back heat on the tank and this is probably the most common cause of over-heating.

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